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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,257	06/06/2001	Robert Hans Meloen	3516.2US	6928

24247 7590 02/27/2003

TRASK BRITT  
P.O. BOX 2550  
SALT LAKE CITY, UT 84110

EXAMINER

RUSSEL, JEFFREY E

ART UNIT	PAPER NUMBER
----------	--------------

1654

14

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**

Address: ASSISTANT COMMISSIONER FOR PATENTS

Washington, D.C. 20231

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER
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ART UNIT	PAPER
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14

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Art Unit: 1654

1. This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures. Applicant must comply with the requirements of the sequence rules (37 CFR 1.821 - 1.825) before the application can be examined under 35 U.S.C. §§ 131 and 132.

See the attached Raw Sequence Listing Error Report.

In addition, it should be noted that in the paper copy of the Sequence Listing filed October 30, 2002, the residue numbers are not aligned with the appropriate amino acids.

With respect to SEQ ID NO:2, because Applicants did not include a Xaa residue after Gly10 in the Sequence Listing, then the miscellaneous feature section defining the possible repeat comprising residues 10-20 is misnumbered. The repeat section ends at position 19 as the sequence is defined in the Sequence Listing; it ends at position 20 if X is considered to be a residue as set forth in the specification. This issue as to how to treat X is also the cause of the misnumbering of the tryptophan residue in the miscellaneous feature section for SEQ ID NO:2. It is recommended that X be included in the definition of SEQ ID NO:2 in the Sequence Listing, with an appropriate definition of X in a miscellaneous feature section.

With respect to claim 5 and the amino acid sequence contained therein, this sequence does not correspond to SEQ ID NO:6 as defined in the Sequence Listing because SEQ ID NO:6 as defined in the Sequence Listing does not permit amino acids other than glycine to be present at positions 6 and 16 of the claimed sequence. Because the amino acid sequence of claim 5 is

Art Unit: 1654

not subject to the sequence disclosure rules (because D-amino acids can be present at positions 6 and 16 of the claimed sequence), it is recommended that claim 5 be amended so that there is no reference to a SEQ ID NO.

Applicant is given ONE MONTH from the mailing date of this communication within which to comply with the sequence rules, 37 CFR 1.821 - 1.825. Failure to comply with these requirements will result in ABANDONMENT of the application under 37 CFR 1.821(g). Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a). Direct the reply to the undersigned. Applicant is requested to return a copy of the attached Notice to Comply with the reply.

2. Because the disks are being irradiated by electron bombardment and are showing up melted, unreadable, and or crazed (CDROMS), a reply to a notice to comply with the sequence rules should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office.

Please direct all replies to the United States Patent and Trademark Office via one (1) of the following:

1. Electronically submitted through EFS-Bio  
(<http://www.uspto.gov/ebs/efs/downloads/documents.htm>), EFS Submission  
User Manual - ePAVE)

2. Mailed to:  
**U.S. Patent and Trademark Office**  
**Box Sequence, P.O. Box 2327**  
**Arlington, VA 22202**

3. Mailed by Federal Express, United Parcel Service or other delivery service to:  
**U. S. Patent and Trademark Office**  
**2011 South Clark Place**  
**Customer Window, Box Sequence**  
**Crystal Plaza Two, Lobby, Room 1B03**

Art Unit: 1654

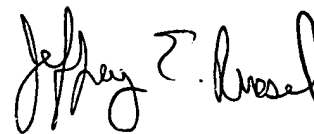
**Arlington, Virginia 22202**

4. Hand Carried directly to the Customer Window at:  
**2011 South Clark Place  
Crystal Plaza Two, Lobby, Room 1B03, Box Sequence,  
Arlington, Virginia 22202**

3. Note that because the paper copy of the sequence listing constitutes an amendment to the specification, its contents must be underlined. (Note that the contents of the computer readable form copy of the sequence listing must not be underlined - this would cause the computer readable form copy of the sequence listing to be disapproved by STIC.)

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey E. Russel at telephone number (703) 308-3975. The examiner can normally be reached on Monday-Thursday from 8:30 A.M. to 6:00 P.M. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Brenda Brumback can be reached at (703) 306-3220. The fax number for Art Unit 1654 for formal communications is (703) 305-3014; for informal communications such as proposed amendments, the fax number (703) 746-5175 can be used. The telephone number for the Technology Center 1 receptionist is (703) 308-0196.



Jeffrey E. Russel

Primary Patent Examiner

Art Unit 1654

JRussel  
February 21, 2003

# NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Applicant must file the items indicated below within the time period set the Office action to which the Notice is attached to avoid abandonment under 35 U.S.C. § 133 (extensions of time may be obtained under the provisions of 37 CFR 1.136(a)).

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

- ☐ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If the effective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (June 1, 1998) and 1211 OG 82 (June 23, 1998).
- ☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- ☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- ☒ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked-up "Raw Sequence Listing."
- ☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- ☐ 7. Other:

## Applicant Must Provide:

- ☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- ☒ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.
- ☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g).

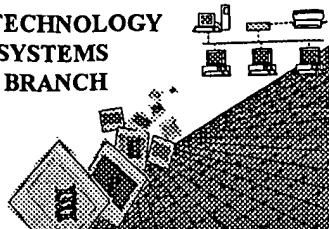
For questions regarding compliance to these requirements, please contact:

- For Rules Interpretation, call (703) 308-4216 or (703) 308-2923
- For CRF Submission Help, call (703) 308-4212
- For PatentIn software Program Support:
  - HELP DESK: (703) 739-8559, ext 508, M-F, 8 AM to 5 PM EST except holidays
  - Email: [PATIN21HELP@uspto.gov](mailto:PATIN21HELP@uspto.gov)
  - To purchase PatentIn software: (703) 306-2600

**PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR RESPONSE**

*Jeffrey E. Russel*  
 Jeffrey E. Russel  
 Primary Patent Examiner  
 Art Unit 1659

BIOTECHNOLOGY  
SYSTEMS  
BRANCH



**RAW SEQUENCE LISTING**  
**ERROR REPORT**

1654  
**RECEIVED**

FEB 19 2003

TECH CENTER 1600/2900

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/876,257B  
Source: 1629  
Date Processed by STIC: 2/10/2003

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER**  
**VERSION 3.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND  
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebs/efs/downloads/documents.htm>> , EFS Submission User Manual- ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202



1600

## RAW SEQUENCE LISTING

DATE: 02/10/2003

PATENT APPLICATION: US/09/876,257B

TIME: 15:15:17

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\02102003\I876257B.raw

**Does Not Comply  
Corrected Diskette Needed**

2 <110> APPLICANT: Meloen, Robert H  
 3 Oonk, Hendrica B  
 5 <120> TITLE OF INVENTION: PEPTIDE, IMMUNOGENIC COMPOSITION AND VACCINE OR  
 6 MEDICAL PREPARATION, A METHOD TO IMMUNISE ANIMALS  
 7 AGAINST THE HORMONE LHRH, AND ANALOGS OF THE LHRH  
 8 TANDEM REPEAT PEPTIDE AND THEIR USE AS VACCINE  
 10 <130> FILE REFERENCE: 3516.2US  
 12 <140> CURRENT APPLICATION NUMBER: US 09/876,257B  
 13 <141> CURRENT FILING DATE: 2001-06-06  
 15 <160> NUMBER OF SEQ ID NOS: 6  
 16 <170> SOFTWARE: PatentIn version 3.1  
 18 <210> SEQ ID NO: 1  
 19 <211> LENGTH: 10  
 20 <212> TYPE: PRT  
 21 <213> ORGANISM: Unknown  
 23 <220> FEATURE:  
 24 <223> OTHER INFORMATION: Luteinising Hormone Releasing Hormone (LHRH) from the  
 hypothalamus of an  
 25 undisclosed mammal.  
 27 <220> FEATURE:  
 28 <221> NAME/KEY: misc\_feature  
 29 <222> LOCATION: (1)..(1)  
 30 <223> OTHER INFORMATION: X at position 1 = pyroglutamic acid  
 32 <220> FEATURE:  
 33 <221> NAME/KEY: misc\_feature  
 34 <222> LOCATION: (10)..(10)  
 35 <223> OTHER INFORMATION: X at position 10 = glycine amide  
 37 <400> SEQUENCE: 1  
 W--> 39 Xaa His Trp Ser Tyr Gly Leu Arg Pro Xaa  
 40 1 5 10  
 43 <210> SEQ ID NO: 2  
 44 <211> LENGTH: 21  
 45 <212> TYPE: PRT  
 46 <213> ORGANISM: Artificial Sequence  
 48 <220> FEATURE:  
 49 <223> OTHER INFORMATION: Vaccine against LHRH from the hypothalamus of an undisclosed  
 mammal.  
 51 <220> FEATURE:  
 52 <221> NAME/KEY: misc\_feature  
 53 <222> LOCATION: (1)..(1)  
 54 <223> OTHER INFORMATION: X at position 1 = preferably pyroglutamic acid, but can also  
 be glutamine  
 55 having attached thereto a tail comprising one or more additional amino acids  
 57 <220> FEATURE:



58 <221> NAME/KEY: misc\_feature  
59 <222> LOCATION: (3)..(3)

## RAW SEQUENCE LISTING

DATE: 02/10/2003

PATENT APPLICATION: US/09/876,257B

TIME: 15:15:17

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\02102003\I876257B.raw

60 <223> OTHER INFORMATION: X at position 3 = tryptophan or formylated tryptophan  
 62 <220> FEATURE:  
 63 <221> NAME/KEY: misc\_feature  
 64 <222> LOCATION: (14)..(14) 13 13 "Ser" is at location 14  
 65 <223> OTHER INFORMATION: X at position 14 = tryptophan or formylated tryptophan  
 67 <220> FEATURE:  
 68 <221> NAME/KEY: misc\_feature  
 69 <222> LOCATION: (10)..(20)  
 70 <223> OTHER INFORMATION: The sequence comprising residues 10-20 may be repeated.  
 72 <220> FEATURE:  
 73 <221> NAME/KEY: misc\_feature  
 74 <222> LOCATION: (21)..(21)  
 75 <223> OTHER INFORMATION: X at position 21 = either nothing or a tail comprising  
 additional amino  
 76 acid; preferably Cys, the C terminal cysteine being added in connection with a  
 77 possible coupling of the peptide to a carrier protein.  
 79 <400> SEQUENCE: 2  
 W--> 81 Xaa His Xaa Ser Tyr Gly Leu Arg Pro Gly Gln His Xaa Ser Tyr Gly  
 82 1 5 10 15  
 85 Leu Arg Pro Gly Xaa  
 86 20  
 89 <210> SEQ ID NO: 3  
 90 <211> LENGTH: 21  
 91 <212> TYPE: PRT  
 92 <213> ORGANISM: Artificial Sequence  
 94 <220> FEATURE:  
 95 <223> OTHER INFORMATION: Vaccine against LHRH from the  
 96 hypothalamus of an undisclosed mammal.  
 98 <220> FEATURE:  
 99 <221> NAME/KEY: misc\_feature  
 100 <222> LOCATION: (1)..(1)  
 101 <223> OTHER INFORMATION: X at position 1 = pyroglutamic acid  
 103 <220> FEATURE:  
 104 <221> NAME/KEY: misc\_feature  
 105 <222> LOCATION: (3)..(3)  
 106 <223> OTHER INFORMATION: X at position 3 = tryptophan or N-formyl-Trp  
 108 <220> FEATURE:  
 109 <221> NAME/KEY: misc\_feature  
 110 <222> LOCATION: (13)..(13)  
 111 <223> OTHER INFORMATION: X at position 13 = tryptophan or N-formyl-Trp  
 113 <220> FEATURE:  
 114 <221> NAME/KEY: misc\_feature  
 115 <222> LOCATION: (10)..(19)  
 116 <223> OTHER INFORMATION: The sequence comprising residues 10-19 may be repeated.  
 118 <400> SEQUENCE: 3  
 W--> 120 Xaa His Xaa Ser Tyr Gly Leu Arg Pro Gly Gln His Xaa Ser Tyr Gly  
 121 1 5 10 15  
 124 Leu Arg Pro Gly Cys  
 125 20  
 128 <210> SEQ ID NO: 4

## RAW SEQUENCE LISTING

DATE: 02/10/2003

PATENT APPLICATION: US/09/876,257B

TIME: 15:15:17

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\02102003\I876257B.raw

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129 <211> LENGTH: 21
130 <212> TYPE: PRT
131 <213> ORGANISM: Artificial Sequence
133 <220> FEATURE:
134 <223> OTHER INFORMATION: Vaccine against LHRH from the
135     hypothalamus of an undisclosed mammal.
137 <220> FEATURE:
138 <221> NAME/KEY: misc_feature
139 <222> LOCATION: (1)..(1)
140 <223> OTHER INFORMATION: X at position 1 = pyroglutamic acid
142 <220> FEATURE:
143 <221> NAME/KEY: misc_feature
144 <222> LOCATION: (6)..(6)
145 <223> OTHER INFORMATION: X at position 6 = a possible replacement of glycine
146     by a dextrorotatory amino acid which in addition contains a side chain by whic
147     h the LHRH tandem unit can be coupled to a carrier compound.
149 <220> FEATURE:
150 <221> NAME/KEY: misc_feature
151 <222> LOCATION: (16)..(16)
152 <223> OTHER INFORMATION: X at position 16 = a possible replacement of
153     glycine by a dextrorotatory amino acid which in addition contains a side chain
154     by which the LHRH tandem unit can be coupled to a carrier compound.
156 <400> SEQUENCE: 4
W--> 158 Xaa His Trp Ser Tyr Xaa Leu Arg Pro Gly Gln His Trp Ser Tyr Xaa
      159 1           5           10           15
      162 Leu Arg Pro Gly Cys
      163           20
166 <210> SEQ ID NO: 5
167 <211> LENGTH: 11
168 <212> TYPE: PRT
169 <213> ORGANISM: Artificial Sequence
171 <220> FEATURE:
172 <223> OTHER INFORMATION: Vaccine against LHRH from the
173     hypothalamus of an undisclosed mammal.
175 <220> FEATURE:
176 <221> NAME/KEY: misc_feature
177 <222> LOCATION: (1)..(1)
178 <223> OTHER INFORMATION: X at position 1 = pyroglutamic acid
180 <220> FEATURE:
181 <221> NAME/KEY: misc_feature
182 <222> LOCATION: (6)..(6)
183 <223> OTHER INFORMATION: X at position 6 = Gly or a dextrorotatory amino
184     acid containing a side chain that allows coupling to a carrier compound.
186 <400> SEQUENCE: 5
W--> 188 Xaa His Trp Ser Tyr Xaa Leu Arg Pro Gly Cys
      189 1           5           10
      192 <210> SEQ ID NO: 6
      193 <211> LENGTH: 22
      194 <212> TYPE: PRT

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## RAW SEQUENCE LISTING

DATE: 02/10/2003

PATENT APPLICATION: US/09/876,257B

TIME: 15:15:17

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\02102003\I876257B.raw

195 <213> ORGANISM: Artificial Sequence  
 197 <220> FEATURE:  
 198 <223> OTHER INFORMATION: Vaccine against LHRH from the  
 199 hypothalamus of an undisclosed mammal.  
 201 <220> FEATURE:  
 202 <221> NAME/KEY: misc\_feature  
 203 <222> LOCATION: (21)..(21) 22  
 204 <223> OTHER INFORMATION: X at position (21) = Cys  
 206 <220> FEATURE:  
 207 <221> NAME/KEY: misc\_feature  
 208 <222> LOCATION: (1)..(21)  
 209 <223> OTHER INFORMATION: The initial cysteine of the peptide comprising  
 210 residues 1-21 is joined to the initial cysteine of an identical peptide  
 211 (residues 2  
 212 2-42) to form a dimer.  
 214 <400> SEQUENCE: 6  
 216 Cys Gln His Trp Ser Tyr Gly Leu Arg Pro Gly Gln His Trp Ser Tyr  
 217 1 5 10 15  
 W--> 220 Gly Leu Arg Pro Gly (Xaa)  
 221 20

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/876,257B

DATE: 02/10/2003  
TIME: 15:15:18

Input Set : A:\pto.vsk.txt  
Output Set: N:\CRF4\02102003\I876257B.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 1, 10  
Seq#:2; Xaa Pos. 1, 3, 13, 21  
Seq#:3; Xaa Pos. 1, 3, 13  
Seq#:4; Xaa Pos. 1, 6, 16  
Seq#:5; Xaa Pos. 1, 6  
Seq#:6; Xaa Pos. 22

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 24  
Seq#:2; Line(s) 54